

FORT CUSTER MILITARY RESERVATION
Bounded north by Territorial Road, on the
east by Dickman Road and Business 94,
on the south by Interstate 94, and on
the west by Longman Road,
Battle Creek
Calhoun County
Michigan

HAER NO. MI-87

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
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Philadelphia, P.A. 19106

HISTORIC AMERICAN ENGINEERING RECORD

FORT CUSTER MILITARY RESERVATION

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Location:

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UTM: Points define the perimeter of Fort Custer Military Reservation

Point	Description	UTM
1	Kalamazoo/Calhoun Cty. Line & River Rd.	16/640180/4689900
2	Conrail tracks & E 643000 UTM	16/643000/4689600
3	Dickman Rd. and Bus. I-94	16/643500/4686600
4	Bus. I-94 and west line sect 20, T25 R8W	16/642040/4682840
5	SE corner of Fort Custer Military Reservation	16/641000/4681680
6	SW corner of Fort Custer Military Reservation	16/634000/4682200
7	Territorial Rd. and E 643000 UTM	16/634000/4684980
8	Territorial Rd. & Augusta Climax Rd.	16/636640/4685120
9	Territorial Rd. and zLongman Rd.	16/638700/4684840
10	Dickman Rd. and E 639000 UTM	16/639000/4688140

USGS Quadrange: Augusta, Michigan 7.5' series

Date of Construction: 1917 to present

Engineer and Architect: United States Army Corps of Engineers with Contractors

Present Owner: United States Army, the State of Michigan, and City of Battle Creek In addition lands are leased to: Michigan Air National Guard; Michigan National Guard; Michigan Naval Reserve; Fort Custer Industrial Park

Present Use: Fort Custer is utilized by the Michigan Military Academy, which schools Army National Guardsmen and Army Reservists for commissioning as officers. The Unit Training Equipment Site (UTES), for the National Guard, maintains army equipment on the base. The artillery ranges are utilized by the Army National Guard, Army Reservists, the Michigan State Police, the ROTC from Western Michigan University, the Air Force Reserves, and the Coast Guard.

Significance: Fort Custer Military Reservation is significant for its importance as a training, hospital, and supply facility of the United States Army from 1917 through 1969.

Project Information: This mitigative document was undertaken in 1995 in accordance with Stipulation 1(A)(2) of the Memorandum of Agreement between the Michigan State Historic Preservation Office, the Advisory Council on Historic Preservation, the City of Battle Creek and the Department of the Army, Corps of Engineers, Detroit District.

Dr. John D. Richards, Principle Investigator; Patricia B. Richards, Ann Kowenstrot and Robert J. Watson, Project Archivists with Great Lakes Archaeological Research Center, Inc.; Eric Oxendorf, Project Photographer.

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FORT CUSTER MILITARY RESERVATION

General Description

The former Fort Custer Military Reservation is located in Kalamazoo and Calhoun counties, Michigan, adjacent to a bend in the Kalamazoo River. The town of Augusta is approximately three miles to the west, and the City of Battle Creek is located six miles to the east.

The regional topography of the Fort Custer area reflects the effects of glacial activity in the region some 10,000 years ago. In these glaciated areas, preglacial topography has been largely obscured by a covering of rock and earth debris left behind as the glaciers melted. Due to poor drainage patterns, streams and wetlands are abundant, and lakes are numerous. Surface topography is generally undulating, with broad gentle rises and wide shallow basins forming a swell and swale topography.

The Fort Custer Military Reservation had been used by the army as a troop training facility from World War I until it was deactivated in 1969. At the height of its activity, Fort Custer consisted of 14,412.43 acres of land. After the decommissioning of the military reservation, much of the land was transferred to different title holders, including the State of Michigan, the Michigan Department of Natural Resources, the city of Battle Creek, and the Veterans Administration. Portions of the site are currently leased to the Michigan National Guard, the Michigan Air National Guard and the Michigan Naval Reserve, which use the facilities for the training of reserve personnel.

History

Pre-Military Occupation

The area which was to become Fort Custer was once used by Indians, seasonally utilizing resources throughout the present state of Michigan.[1] In 1830, white settlers from New York state arrived in search of farmland.[2] Land use was predominantly agricultural through the turn of the century.[3]

In early 1917 the Fort Custer area was a vast area of rolling farmland and woods known as Harmonia Prairie, which had once been the location of the pioneer settlement of Harmonia, a pre-Civil War Spiritualist Utopian city.[4, 5, 6] A private school was managed and taught by Quakers, later turned Spiritualists.[7] Harmonia was intended to be the national Spiritualistic headquarters, and a large wooden three-story dormitory was built for the seminary.[8] The village was chartered on November 14, 1855.[9] All traces of the village of Harmonia with the exception of the school, were eradicated during initial construction at Camp Custer. The school was razed in 1941.[10] All that remains of the village is Bedford Cemetery located near the WWII water towers. Lawler's Corners, the nearest coach stop to Augusta in the 1830s, was located at the junction of Territorial and Climax-Augusta roads.[11] The town was named after James Lawler, one of the earliest known pioneers in the area.[12] The town consisted of a general store, church/school house, later a filling station and second-hand store. A cemetery associated with Lawler's Corners was created in 1831 or 1832, utilized until 1922, and is presently inactive.[13]

World War I Era

With the advent of war in Europe, the Army sought an area suitable as a campsite for training of men from Michigan and Wisconsin.[14] The Battle Creek area was appealing for several reasons: it was dry; it had two railroad trunk lines; good water, soil, and climate; public spirit; and plenty of room for a training camp. On May 19, 1917, the Battle Creek Chamber of Commerce was asked

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to submit an offer of a "cantonment" site to serve Michigan and Wisconsin troops.[15] On June 11, 1917, Secretary of War Newton D. Baker announced that the Army had chosen the site.[16] A special lease arrangement was made between the local Chamber of Commerce and the government: "The Chamber acquired 130 parcels of land, mostly from small farmers. Lease of the land called for \$25 an acre for the first two years with an average sale price of \$98 an acre after the two year period." [17]

A Seattle contracting firm was given the contract, and by July 18, construction began.[18] The total reservation amounted to 9,139 acres.[19] Cantonment commander General Joseph T. Dickman arrived on the 26th of August, and the facility was ready to accept troops by September.[20] In October, the camp was officially dedicated in the presence of the widow of General George A. Custer, for whom the camp was named.[21]

Camp Custer contained over 2000 buildings made of pine, with room for over 36,000 troops.[22] In addition, 17 recreation buildings and a remount station to equip and train horses and mules for Army duty were built.[23] By the end of World War I, between 80,000 and 100,000 troops had been trained at Camp Custer.[24]

Camp Custer Base Hospital was established during World War I.[25] The hospital was located on the western edge of the military reservation, near Eagle Lake. Because of the distance, it was not easily accessible to the remainder of the military reservation. Consequently, the hospital was self-sufficient with its own barracks, mess halls, laundries, a chapel, and a steam heating plant.[26]

Between the Wars

In 1920, orders were issued for the gradual abandonment of Camp Custer.[27] From 1920 through 1940 the camp was used primarily in the summer as a Citizens Military Training Camp (CMTC) and Reserved Officer Training Corps (ROTC) cadet military training.[28, 29, 30, 31] Beginning in 1921 as an experiment, the CMTC served as a military training camp for non-military young males from Michigan and Wisconsin. The camp was conducted by the War Department in the Sixth Corps Area.[32] The purpose of the CMTC was:

"To bring together young men of all types, both native and foreign born; to develop closer national and social unity; to teach the privileges, duties and responsibilities of American citizenship; to show the public, by actual example, that camp instruction of the kind contemplated will be to the liking of their sons; that it will develop them physically, mentally and morally; and will teach Americanism in its true sense." [33]

By Executive Order issued in 1923, 673 acres were transferred to the Veterans Administration. The Battle Creek Administration (later V.A.) Hospital was built in 1924.[34, 35]

By 1925, most of the Camp Custer buildings had been condemned and removed.[36] The Civilian Conservation Corps (CCC) established headquarters at Camp Custer in 1933 remodeling the remaining 15 buildings at the Camp. In addition, several new buildings were constructed.[37]

Between August 8 and 23, 1936, the Second Annual War Games were conducted at Camp Custer.[38] More than 24,000 troops of the Michigan, Wisconsin, and Illinois National Guard and Regular Army participated.[39] These maneuvers were intended to prepare soldiers for any emergency which might overtake the country. The War Games were a part of a larger exercise which extended from the shore of Lake Michigan to West Virginia.[40] The forces of the Sixth Corps area, Michigan, Wisconsin, and Illinois, "battled" the Fifth Corps area, comprised of troops

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from Indiana, Kentucky, and West Virginia, in order to gain control of Camp Custer.[41] The units taking part in the maneuvers were quartermaster corps, medical troops, hospital units, anti-aircraft forces, motorized artillery, engineers, coast artillery, infantry, and squadrons of bombing planes (the Flying Red Devils).[42, 43]

In July of 1938, the Works Progress Administration (WPA) was charged with transforming Camp Custer into a "model military installation".[44] The acreage of the military reservation was expanded to total approximately 14,000 acres in 1940. Following that, an additional 2,000 acres were acquired for use as an artillery range.[45] On August 17, 1940, Camp Custer became a permanent base and the name was changed to Fort Custer.[46] Over 1,000 buildings were constructed between 1940 and 1941.[47] The Fort became home to the 5th Infantry Division (Red Diamond Division) who completed their combat training at Fort Custer prior to being transferred to Iceland.[48, 49]

World War II

With the advent of the entry of the United States into World War II, Fort Custer was determined inadequate to the Army's mobilization. The base was enlarged by more than 6000 acres, and the buildings constructed during World War I were replaced with 700 new buildings. Existing utilities were replaced. Approximately \$12 million were spent to upgrade Fort Custer.

The Percy Jones Army Hospital, formerly known as the Base Hospital, acquired jurisdiction over all of the facilities at Fort Custer, with the exception of the POW stockade. In 1944-1945, these facilities began to be utilized as a convalescent center and recreational area for men recuperating from wounds and illnesses suffered in combat zones.[50, 51] At its peak, there were 10,000 men convalescing at the Percy Jones Army Hospital.[52] In July of 1949, jurisdiction of the Fort was passed from the Percy Jones Army Hospital to the 5th Army at Chicago, as the need for the Fort as a convalescent center was no longer required.[53, 54]

In late 1944 and early 1945, Fort Custer's primary role changed from combat training to supply and repair.[55] The 94th Infantry moved in for issuance of equipment before reassignment to Kansas for combat training.[56] With the transfer of combat units from Fort Custer, the Quartermaster and repair shop branches were expanded extensively.[57] The Quartermaster Department served as a supply center for all army posts in Michigan.[58] Equipment to be sorted, classified, repaired, and distributed for reissue to troops throughout the world was sent to Fort Custer from other installations from all over the continental United States (CONUS), in addition to Alaska and other sectors.[59] The Quartermaster Department received and classified over 50,000 pieces of equipment a week.[60] Various facilities operated by the Ordnance Department rebuilt automotive equipment and renewed worn tires.[61] Kellogg Field, formerly an Army Air Forces training center, changed its focus to repairing and modifying aircraft used in training and combat.[62]

Another function of the Fort at this time was the Prisoner of War (POW) camp.[63, 64] This camp housed thousands of German and Italian POWs during its time.[65, 66] The prisoners were sent to Fort Custer for training in various occupations and then shipped to other military installations for use as duty workers, until the end of the war.[67]

As early as February of 1946, the Navy Department was considering the Battle Creek area for the establishment of a Naval Reserve Training Center. The center was built at the Goguac Lake Pumping Station and was operational in August of 1949.[68] The Navy then inherited property from NORAD and the Naval Reserve Center moved to its present site of the former headquarters of

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the Custer Air Force Station in 1973.[69] This building also houses the center for the Marine Corps Reserves, located to Fort Custer in May of 1970.[70]

The Cold War

In 1949, the Fort, having fallen into disuse after WWII and the deactivation of Percy Jones Hospital, was reactivated as a training center in response to the Korean conflict.[71] Money was appropriated to recondition the buildings.[72] The 22nd Anti-Aircraft Artillery Group (3500 troops) was assigned from Fort Bliss, Texas.[73] The Group was comprised of four battalions: the 8th Automatic Weapon AAA Battalion, equipped with self-propelled 37mm weapons; the 504th Gun Battalion, equipped with 90mm guns; the 79th Gun Battalion, a 120mm weapon unit; and the 30th AAA Battalion, with 40mm weapons.[74] The transfer of the entire group from Texas brought with it approximately 200 families of officers and enlisted men.[75] To accommodate the additional people, the War Department appropriated \$1,000,000 to convert 50 Fort Custer barracks into 200 apartment units.[76] These AAA units were later moved to sites closer to Detroit and Chicago.[77]

In January of 1951, the Fort was designated as a permanent reception center for inductees from Michigan, Wisconsin, Illinois, and Indiana. New repairs were made to offer the buildings permanent protection. Complete rehabilitation of 66 mess halls, repairs and resurfacing of roads was accomplished by civilian contractors. The reception center duties included processing men in and out of the Army, reassigning soldiers to new units, and the training of troops that were to provide security for Detroit and other Michigan cities. At this time the 163rd and 171st military battalions were training at the Fort, in addition to 2000 Military Police and the 22nd and 228th AAA units. These activities represented one of several peaks in the history of the camp.[78]

During the 1950's and 1960's, Custer Air Force Station came into being. The 781st Aircraft Control and Warning (AC&W) Squadron came to the base in 1951 to operate a new radar facility fenced apart from the fort. The property it was built upon was permitted from V.A. Hospital.[79] This radar station was associated with the Pine Tree Radar Net which spanned the northern boundary of the United States.[80] Its purpose was mainly for identification of known and enemy aircraft. Beginning in the mid-50's, a Semi-Automatic Ground Environment (SAGE) Direction Center was constructed along the eastern edge of the military reservation. The property was acquired by transfer from the Army in 1956, and construction was completed in 1957.[81] This system was to make the AC&W station obsolete. The SAGE center received information from radar nets stations at Selfridge AFB, Fort Custer, Port Austin, and Bellefontaine.[82] The center was necessary due to the increasing speeds of aircraft.[83] The SAGE center became active in 1957, and was one of the installations included in the Department of Defense Press Release of October 29, 1969, as scheduled for inactivation.[84] Due to its inability to defend against ballistic missile attacks, the SAGE center was closed down.[85, 86]

The 1950's saw the gradual deactivation of Fort Custer. When many Michigan men were returning from Korean duty, in 1952, Fort Custer was used as a separation center.[87] In March of 1953, the reception center moved from Fort Custer to Fort Breckenridge, KY.[88] The induction center was moved to Fort Sheridan, IL, and the separation center was moved to Fort Knox, KY, in the spring of 1953.[89] About half of the buildings at Fort Custer were mothballed. This procedure required the draining all of the plumbing, removing light fixtures, cleaning furnaces and smoke pipes, barring the windows, pitching the roofs, policing the grounds and padlocking the doors, the mattresses and bunks were stacked in warehouses, and all of the metal parts in the barracks, galleys, theaters, post exchanges, chapels, and service buildings got a coat of rust preventative.[90] Battle Creek's industries were able to absorb the civilians who had worked at the Fort.[91]

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In January of 1953, the Percy Jones Hospital was reopened as a part of Michigan's State Home and Training School complex.[92] The Fort Custer State Home was located on the west end of the military reservation. The property was leased from the United States Army and was established as a separate facility for the care of mentally disabled people.[93] The home was in existence for 16 years.

The Modern Era

In 1963, the Detroit Air Defense Sector, headquartered at the Custer Air Force Station, became the largest and most strategically important air defense unit in the United States and Canada as a result of the realignment of the Air Defense Command.[94] This sector spread from northern Lower Michigan to the Tennessee-North Carolina area in the south, and from Lake Michigan to Watertown, N.Y.[95] The Custer Air Force Station was the remaining full-time military installation at Fort Custer by 1969.[96] It was headquarters of the 34th North American Air Defense (NORAD) Division.[97] Within this Division was the U.S. Air Force's 34th Air Division, the Army's 31st Air Defense Missile Brigade, and the Canadian Armed Forces's Air Defense Command.[98] The 34th Air Division was deactivated in November, 1969.[99] The men and equipment moved out and this marked the end of active military operations at Fort Custer.

Between 1965 and 1969, Fort Custer was home to the Job Corp program.[100] The training center provided young men ages 16-21 with skills needed in an urban work environment. At the end of a two-stage one year program, the youths were presented with a high school diploma. The Job Corp Center encompassed land which stretched from slightly north of Dickman Road south to approximately one mile south of Hart Lake and from the west shore of Hart Lake east to Kellogg Airport.[101]

Portions of the former Custer Air Force Station were converted to homes for the elderly in 1973. Those buildings included the former United States Air Force police building, dormitories, and a theater. These buildings were called the Docsa Home, named after the organization who proposed to the Michigan Department of Health the remodeling of the buildings, Docsa and Smith Associates.[102]

In late October of 1979, Fort Custer was chosen among many, to be the site of a national cemetery. The old Post Cemetery was established in 1917 during mobilization for WWI.[103] The National Cemetery is located on a 770 acre parcel of land which is south of the Kalamazoo River, Dickman Road borders it on the south, Armstrong Road on the east, and River Road on the north.[104]

A large portion of the southwest area of Fort Custer was converted to a recreational area in the late 1960's. In August of 1971, the recreational area land was officially transferred from federal to state ownership.[105] The area encompasses approximately 3,000 acres and has been partially developed for recreational purposes.

Presently a portion of the former Fort Custer is used as a training site for reserve components. Located on the reservation is the Michigan Military Academy, which schools Army National Guardsmen and Army Reservists for commissioning as officers.[106] This facility was located to Fort Custer in 1966. The Unit Training Equipment Site (UTES), for the National Guard, maintains army equipment on the base.[107] The various artillery ranges are utilized by the Army National Guard, Army Reservists, the Michigan State Police, the ROTC from Western Michigan University, the Air Force Reserves, and the Coast Guard.[108] A permanent training course for canine units established in WW I is presently used by the Michigan State Police.

Other facilities which gradually took over the dilapidated Fort were welcomed as Fort Custer presented itself as an ideal site for an industrial park. A truck driving training program, associated

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with Lansing Community College, came to the Fort in 1968.[109] WUHQ TV leases the former headquarters building at the Fort.[110] Upwards of 37 businesses have their offices and manufacturing buildings in the Fort Custer Industrial Park. Among these are Archway Cookies, Inc., Consolidated Freightways, The Kellogg Company, Richard-Allan Medical Industries, Inc., and U.S. Customs Service.[111]

HISTORY OF THE UNITED STATES AIR FORCE

Early History

The United States Air Force (USAF) is quintessentially a 20th Century institution. In contrast to the Army and the Navy which have deep roots in the United States' 18th Century struggle for freedom, the emergence of the Air Force closely parallels the trend of accelerated technological innovation which is the hallmark of 20th Century social and political developments. However, it is possible to identify a late 18th Century interest in manned aerial devices as the initial impetus for the modern application of aeronautics to military science.

By the end of the 18th Century the utility of balloons as an adjunct to military operations had been effectively demonstrated by the French. Early American observers of these developments included Benjamin Franklin and George Washington.[112] However, it was not until the advent of the Civil War that American military operations made use of balloons as aerial reconnaissance devices.

Balloon Corps

The first United States military organization devoted to aerial warfare techniques was formally recognized in 1861 as the Balloon Corps of the Army of the Potomac. Used primarily in the Richmond campaign of 1862, the Corps demonstrated the potential of aerial methods of observation but was disbanded in 1863.[113]

Signal Corps

Following the Civil War, the skirmish-like nature of most American military campaigns found little use for airborne surveillance techniques. Consequently, military interest in aerial reconnaissance waned. However, on October 1, 1890 the United States Congress established the U.S. Army Signal Corps and directed the newly formed organization to serve as the Army's information and communication arm. By 1892, General Adolphus V. Greeley, Chief Signal Officer of the Army, and an advocate of ballooning, had established a new balloon corps within the Signal Corps.[114]

Balloon Section of the Signal Corps

With the advent of hostilities associated with the Spanish-American War, the Signal Corps recognized an opportunity to employ the recently reactivated balloon section. In June and July of 1898, a Signal Corps observation balloon was deployed over Santiago, Cuba and used to gather information concerning fleet movements in Santiago Harbor and later to guide artillery fire during the battle of San Juan Hill. Although these missions were successful, the single balloon available was destroyed by Spanish ground fire. Before replacement balloons could be obtained and deployed, the war ended.[115]

Aeronautical Division of the Signal Corps

Following the end of the Spanish-American War, interest in military aeronautics once again declined. However, European developments had begun to demonstrate the greatly extended capabilities of dirigibles—propeller driven, steerable, lighter-than-air balloons with rigid frames.

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Accordingly, in 1907, the Signal Corps established an Aeronautical Division broadly charged with responsibility for aerial military operations. Soon thereafter, in August of 1908 the Division purchased a single dirigible for instruction and exhibition.[116]

The Aviation Section of the Signal Corps

As early as 1898, the Army, under the urging of General Greeley, had provided Samuel Langley with a grant of \$50,000.00 to be used to design and build a pilotable heavier-than-air craft suitable for military use. The spectacular failure of Langley's initial efforts led to a lengthy resistance on the part of the military establishment to further aeronautical experiments.[117] However, following the successful flights of Wilbur and Orville Wright, the Army took delivery of a single Wright-built plane in 1909.[118] By 1911, the utility of the new invention had become readily apparent and Congress funded purchase of five additional airplanes.[119] The continued success of the poorly funded Aeronautical Division eventually led to congressional establishment in 1914 of the Aviation Section of the Signal Corps. This marked the emergence of a permanent aviation corps within the Army.[120]

Bureau of Aircraft Production and the Division of Military Aeronautics

By the beginning of World War I, the Aviation Section included 131 officers, 1087 enlisted men and less than 250 outdated planes. Thus, although the history of United States air power in W.W.I has been characterized as the "Golden Age" of individual aerial combat the total performance of Army aviation was less noteworthy.[121] In large part this was due to an overly ambitious program of expansion designed to meet unrealistic goals. Proponents of an expanded air corps seized the opportunity created by the repeated requests for assistance of the European Allies to propose construction of 22,625 aircraft along with a commensurate buildup of personnel. In order to manage the demands of this production schedule, the Aircraft Production Board was established in 1917 and placed under control of the Secretaries of War and Navy.[122] By 1918, the inadequacies of this arrangement forced transferral of the United States aviation program from the Signal Corps to two newly created agencies under control of the Secretary of War. The Bureau of Aircraft Production was to be responsible for materiel needs while the Division of Military Aeronautics was charged with training and operations. By the end of World War I it had become apparent that the newly reorganized aviation program was hampered by a lack of coordination between the two agencies charged with oversight of the program. Consequently, both agencies were brought under the control of a newly appointed Director of Air Service.[123]

The use of air power in World War I demonstrated both the promise and the pitfalls inherent in the use of new, virtually untried technology. Moreover, it was becoming clear that implementation of new technology was often poorly supported by existing institutional structures. It was this dialectic between accelerating technological developments and resultant institutional restructuring which would lead to the emergence of the Air Force as a separate branch of the American military establishment.

The Air Corps and GHO Air Force

In the period following World War I, the need to demobilize from war time levels of military readiness while maintaining an appropriate level of peace time military strength resulted in the Army Reorganization Act of 1920. This legislation established the Air Service as a combatant arm of the U.S. Army.[124] Although a move to establish a separate Department of Aeronautics was forestalled by critics of military aviation, Congress passed legislation renaming the Air Service and extending its capabilities. The newly created Air Corps remained a branch of the Army but was granted funds adequate to support a major expansion of peace time capabilities. Central to this expansion was the founding of the Air Corps Training Center at San Antonio, Texas and the

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establishment of the Materiel Division at what would become Wright-Patterson AFB in Dayton Ohio.[125]

The post-World War I reorganization of the old Air Service was in many ways defined by the controversy over the proper role of an expanded aviation corps. In large part the dialogue revolved around the utility of aircraft as long-range bombers.[126] The controversy began to take shape during World War I when then Major William "Billy" Mitchell advocated strategic bombardment as the primary role of a war time air corps.[127] Mitchell's ensuing aggressive advocacy of an autonomous and greatly expanded air service eventually culminated in his highly publicized court-martial in 1925.[128] However, it was not until 1935 that Congress authorized the creation of a General Headquarters (GHQ) Air Force designed as a central strike force charged with defense of United States coastal perimeters.[129] By the beginning of World War II, the Air Corp had successfully shifted its emphasis from providing support for ground troops to carrying out strategic bombardment of enemy targets. Unfortunately, this reemphasis on the changing role of the Air Corps resulted in a squandering of available resources and less support for fighter aircraft. In any event, the onset of World War II saw a basically "fifth-rate airforce" unprepared to successfully confront more advanced and highly mobilized Axis forces.[130]

World War II and the Expanded Role of the Air Corps

The need to rearm and mobilize in order to meet demands created by the escalation of World War II and the stunning successes of the German *Luftwaffe* resulted in the promulgation of two Aviation Objectives designed to increase American air power. Eventually the Air Corp or Army Air Forces (AAF) was expanded to include 243 combat groups, 80,000 aircraft, and 2,400,000 men. In addition, strategic bombardment was clearly identified as the major role of the AAF.[131] This enormous expansion resulted in additional organizational problems which culminated in the 1942 reorganization of the War Department into separate and autonomous commands including Army Air Forces, Army Ground Forces, and Army Service Forces.[132] This reorganization remained in effect throughout the remainder of World War II but was slated to terminate six months after the end of the war unless made permanent by act of Congress.

The Cold War and the USAF

The logistical lessons of World War II strongly supported the notion of an autonomous air arm. However, resistance to the creation of a central defense authority and separate but equal army, navy and air services remained high. Finally, in 1947, the National Security Act created a National Military Establishment under control of a civilian cabinet-level Secretary of Defense. A tripartite division into Army, Navy, and Air Force was formalized with civilian directors assigned to each military branch. The Air Force was further charged under Executive Order 9877 with responsibility for maintaining and coordinating air operations including ground support and transport of troops, training, reconnaissance, and strategic air defense of the United States.[133]

This formal recognition of the Air Force as a separate service finally confirmed a legal status on American military aviation. More importantly, the admonition to provide for the strategic defense of the United States set the stage for Air Force policies developed during the years of the Korean Conflict and the ensuing Cold War. The need to maintain a strong defensive posture, in addition to a greater than typical peace time level of readiness would lead the Air Force into an expanded role as guardian of the nation's skies. In addition to a continuing emphasis on the deployment of long-range strategic bombers, the Air Force also developed defense and retaliation capabilities based upon use of ballistic missile systems. The recognition of the possible need to defend against intercontinental ballistic missile attacks was a major factor contributing to the emergence of the Air Force's Cold War defensive posture. Moreover, the need to support widespread continental

defense systems led directly to the establishment of distant and early warning systems facilities like the Fort Custer P-67 Radar Station discussed below.[134]

HISTORY OF UNITED STATES AIR FORCE PARTICIPATION IN AIR DEFENSE

Following World War II the United States was intent upon demobilization. Sole possession of the atomic bomb and the means to deliver it, along with the need to return to a peace time economy made any danger as a result of an air attack remote to an American people and an American Congress allocating funding.[135] The Air Force along with the other branches of the armed services was drastically reduced. In response to this reduction the Air Force reorganized along functional lines in 1946.[136] This reorganization established the Air Defense Command (ADC) as one of three primary combat commands. The ADC was the lesser of the three commands being non combative and received very little in the way of funding. Nonetheless, it was believed immediately following the war that an attack from an enemy would undoubtedly be an air attack. Since the United States was committed to a non aggressive position, it needed the ability to defend itself against such an attack. An integral part of any continental air defense had to be an early-warning radar network directing weapons capable of intercepting and destroying the attacking bombers.[137]

After World War II - Temporary Solutions

After 1947 a newly independent Air Force began to push its concepts of air defense. The Air Force wrote and approved a plan called Supremacy which provided an aircraft control and warning system for the United States and Alaska. The plan called for a network of 411 radar stations at a cost of \$400 million. While the subsequent invasion of Czechoslovakia by the Soviet Union in 1948, seemed to emphasize the need for an effective air defense, Congress adjourned in 1948 with considering the Air Force's plan. It seemed unlikely that the United States Congress would ever approve such a plan as costly as Supremacy, and a newly established Air defense Division of the USAF developed a compromise (and less costly) plan. This plan identified the most urgent need of continental air defense as radar for an early-warning network.[138]

The modified plan called for installation of a Permanent System of seventy-five early-warning radar stations and ten control centers in the United States and Canada at a cost of \$86 million. Obsolete, but usable radar sets already in possession of the USAF would be utilized in the eight-five installations, to be operational by 1952.[139] This plan was approved by Congress in 1949. While the radar coverage provided by this plan could not provide adequate coverage, it allowed the USAF to begin construction of air defense systems for certain key areas of the country including the Northeast, the Northwest, California, and New Mexico.

The completion and operationalization of this system would require several years, and the USAF decided it was necessary to provide some air defense protection in the interim. To this end, the USAF began to expand a temporary network established in 1948.[140] This temporary network called Lashup was funded by funds diverted from money appropriated for other purposes and utilized land already owned by the government. Two significant events occurred which hastened the construction of the radar network. First, the Soviet Union detonated an atomic device in 1949 which ended the United States monopoly on atomic power. Secondly, North Korea invaded South Korea with the aid of Soviet equipment and advisors, demonstrating the aggressive nature of the Soviet Union.[141] The forty-four stations of the Lashup system were rushed to completion in 1950, and the building of the Permanent System commenced at an earlier and accelerated pace toward the end of an earlier completion date. At the same time, the USAF began to disperse its fighter-interceptor squadrons over more bases.[142]

Components of the System: The 1950's

Begun in 1950, the construction of the Permanent System proceeded slowly, despite efforts of the USAF to speed implementation of the system. Radar equipment shortages along with strikes delayed completion of the seventy-five radar stations of the network until 1952. Even then, the Permanent System was not fully operational until April of 1953.[143] By mid-1954, however, a nationwide integrated air defense system had become a reality. The Permanent System of early warning radars was in operation, and a large interceptor force patrolled the skies.

In spite of early successes, radar systems had certain defects. Radar coverage was shallow and nonexistent at low altitudes. In addition there was no early warning system in place along the sea coast or the polar region. To account for these deficiencies Various Air Defense Zones were established and construction began on a series of chains of radar stations including the Pinetree Line across southern Canada, the Mid-Canada Line and the Dew Line close the Arctic Circle.[144]

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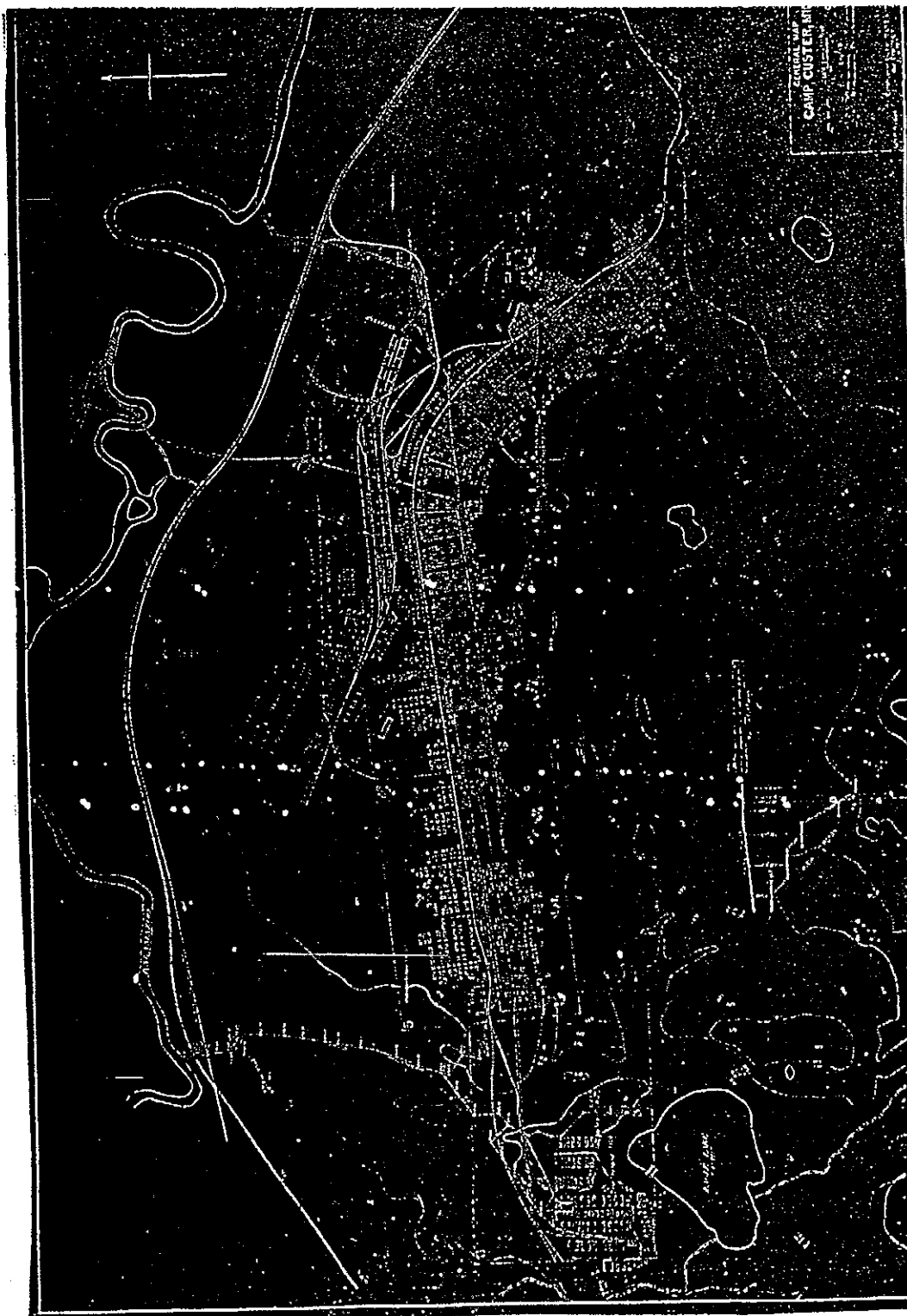
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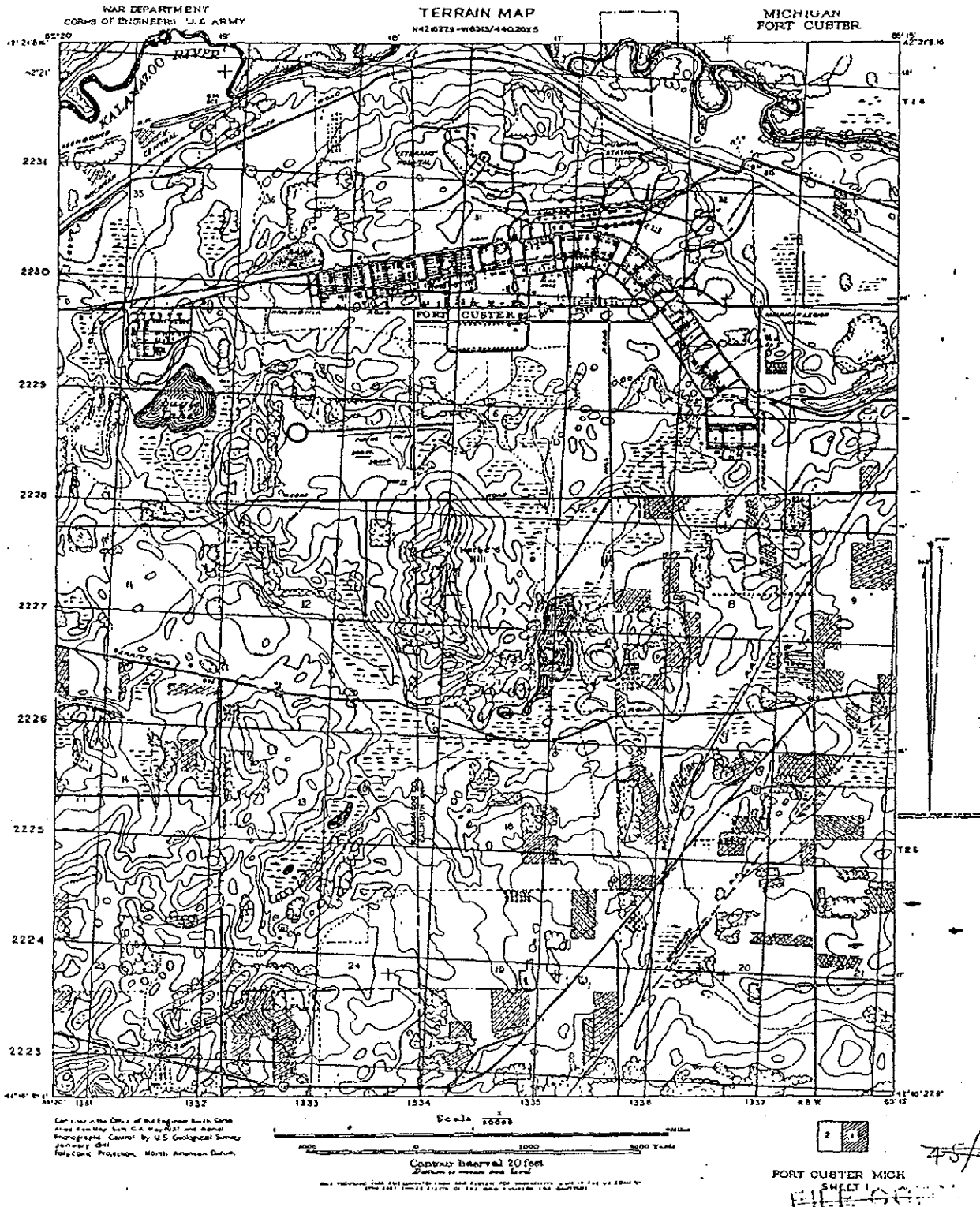
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